Exob.
8-4

MEMORANDUM TO EXOBIOLOGY COMMITTEE

Space Science Board

National Academy of Science

1. You will by now have received, and perhaps even read, reports of the last Board meeting (June 25). Under pressure from Congress, which was rather critical of the establishment of the Office of Life Sciences in NASA (cf. Science, August 12, 1960) it was considered important to consolidate advisory activities of the Academy in space research, and this has been done by a consolidation of the Bioastronautics Committee with the Space Science Board. I hope I have faithfully reflected your judgment as well as my own in strenuously urging against a composite Biology Committee; biological interests on the Board are now represented by three separate committees, successors to the former Committee 11, and now designated:

14. Exobiology 15. Environmental Biology 16. Man-in-space

Committee 14 will continue with the same membership as "Westex". With the maturing organization in NASA itself (e.g. the Biosciences Advisory Committee with Mel Calvin to review operational proposals, and the intramural steering committees) our responsibilities are to represent the scientific community in the general oversight of the national program. This committee is a unique concentration of interest in exobiology and can perform an indispensable function in continually reviewing the basic approaches to it, and in eliciting and criticizing ideas from all our colleagues.

Next meeting.

2. If Aaron Novick is still agreeable, I would like to suggest that we hold a meeting at Eugene in October, either during the first or the last week of that month. If any of you have specific exclusions (and could otherwise attend) please let me know soon. Perhaps the chief news to date has been the lack of any striking new developments. I think you will not accuse me of having insisted on unnecessary diversions, but I believe this would be a good occasion to get together again and see just where we stand. Agenda items will be welcomed; I would also propose to get your reactions to:

A. The present concept of the planetary microscope system (see attachments)
B. Calvin's findings on meteorite components (hoping he can be present to talk about them)
C. Status of IR studies on planets, especially the earth; and in particular the design factors that should be suggested for high altitude surveys that are now contemplated
D. The detection systems summarized in the NRC-Chemistry report May 24, 1958 (of which I hope you will soon have received a copy).

3. During the past months, I have spent some time trying to get a clearer picture of the present status of IR studies of the earth and there have been several informal meetings. Most of what there is should doubtless remain classified; however, General Flickinger has thrown strong support to mounting high altitude experiments specifically for the purpose of matching the Sinton telescope data and Calvin's laboratory work. The IR wavelengths we are interested in do not appear to have been studied from our standpoint and certainly not at the requisite resolution. We could help this program by submitting more concrete ideas on which wavelengths ought to be looked at, what kinds of terrain, and so forth.

4. The attached memoranda are doing multiple duty as reports; 8-3 is my best effort at completing our task of a long range prospectus; 8-1,2 will serve to indicate the directions of the planetary microscope program here. Your comments, even if they are not critical, would be welcome, as I am trying to report a consensus without burdening you with recurrent exchanges of papers.

Cordially,

Joshua Lederberg

9/5/60